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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/505,246

04/22/2005

Pierre Gandel

1429-140

7422

24106 7590 03/25/2008
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EXAMINER

TAMAI, KARL I

ART UNIT

PAPER NUMBER

2834

MAIL DATE

DELIVERY MODE

03/25/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/505,246	Applicant(s) GANDEL ET AL.	
	Examiner KARL I.E. TAMAI	Art Unit 2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 36-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 36-41, 43 and 44 is/are rejected.
- 7) ☒ Claim(s) 42 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 36-38 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller (US 6840200) and Okabe (JP 02-303343). Miller teaches a linear actuator having a brushless multiphase synchronous (permanent magnet or synchronous) motor having a stator (Fig. 3, #66) and a rotor (Fig. 3, #68); a control organ (Fig. 3, #70) having a retracted position and an extended position relative to the electric motor; a driving means 102 for converting a rotational movement of the electric motor into a linear displacement of the control organ so as to drive the control organ from the

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retracted position toward the extended position over several revolutions of the electric motor, the driving means being reversible; a restoring means (Fig. 3, #78) cooperative directly with the control organ 70 for restoring the control organ to the retracted position (zero position) when a power supply to the electric motor is shut off (col. 6, lines 54-68). Miller teaches a position sensor 80, 82. The drive means including an independent reversible reduction means being the balls and ball nut 102, where the nut and threaded rod are ball nut and threads. Miller teaches every aspect of the invention except the shaft being fixed and the rotor having a threaded nut which is movable in a helical direction under the stator for linear displacement of the control organ. Okabe teaches a reversible motor with a rotor 4 having a threaded nut 3 engaging a fixed threaded shaft 1 to provide straight linear motion to the control organ 9. The threaded nut moveable in a helical rotation due to the threaded fixed shaft and the rotation of the rotor magnet 4. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the actuator of Miller fixed threaded shaft and with rotor with a nut to provide straight linear movement as taught by Okabe.

3. Claims 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miller (US 6840200) and Okabe (JP 02-303343), in further view of Akagi (US 4742989). Miller and Okabe teach every aspect of the invention except a first spring/magnet for controlling the rotation of the rotor and a second spring/magnet directly on the control organ. Akagi teaches a spring for the rotor 19 and a spring for the control organ 5, 7, 10 for providing a return force to prevent an open locking state in case of electrical supply

failure. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the actuator of Miller and Okabe with the first and second restoring means as taught by Akagi to prevent locking in the event of a power failure.

4. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miller (US 6840200) and Okabe (JP 02-303343), in further view of Lamb (US 6005317). Miller and Okabe teach every aspect of the invention except the driving means having a roller and cam, the roller being cooperative with the control organ and driven by the cam being driven by the rotor. However, Lamb teaches a linear actuator (Fig. 3, #60) with a roller and cam, the roller (Fig. 7, #70) being cooperative with a control organ (Fig. 3, #78) and driven by a cam (Fig. 3, #63) being driven by the rotor. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ball screw type driving means of Miller and Okabe in view of the roller cam type driving means as taught by Lamb because it provides an equivalent and equally well known means for converting rotary motion to linear motion that has the added benefits of being economical and able to maintain a preset speed regardless of load variation (Lamb, Col. 1, Lines 52-59).

5. Claims 43 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller (US 6840200) and Okabe (JP 02-303343), in further view of Huber (US 5041748). Miller and Okabe teach every aspect of the invention except the position detecting means having a plurality of sensors for detecting magnet poles on the rotor

and a linear sensor for the control organ. Huber teaches a plurality of sensors 27(linear), 30(poled rotary), 31(poled rotary) for providing controlled feedback to control the linear actuator. It would have been obvious to one of ordinary skill in the art at the time of the invention to construct the motor Miller and Okabe with the plurality of poled sensors and the linear sensor to provide precise positive feedback for controlling the linear actuator, as taught by Huber.

Allowable Subject Matter

6. Claim 42 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: With respect to claim 42, while prior art does teach some of the material included in the claim, it does not teach the combination including a first and second cam with crossed profiles and rotatable with a different speed.

Response to Arguments

7. Applicant's arguments filed 1/5/2008 have been fully considered but they are moot in view of the new grounds of rejection. Applicant's argument regarding the ball/screw is not persuasive as the limitation is still incorporated in the claims 36 and 40. Applicant's argument regarding independent reduction means is not persuasive. The screw and nut system of Miller and Okabe both provide an independent reduction means from the rotation speed of the rotor to the linear movement provided by the threaded shaft/nut.

Conclusion

8. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl I.E. Tamai whose telephone number is (571) 272 - 2036.

The examiner can be normally contacted on Monday through Friday from 8:00 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Darren Schuberg, can be reached at (571) 272 - 2044. The facsimile number for the Group is (571) 273 - 8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Karl I Tamai/
PRIMARY PATENT EXAMINER
March 29, 2008